

Abstract

According to the present invention a method for grafting
5 a chemical compound to a predetermined region of a
support substrate (4) is disclosed, comprising:

a) irradiating selectively the support substrate with
electromagnetic radiation and/or particle radiation
in order to both define said predetermined region
10 and to form at least one reactive functional group
or a precursor thereof in said predetermined region
of the support substrate;

b) exposing the irradiated support substrate to said
chemical compound or to a precursor thereof.

15 Therefore, only these very few steps are needed to
effectively grafting the desired chemical compound, such
as an organic compound, to the predetermined regions of
the support substrate. Moreover, the irradiation step can
20 be carried out in a vastly flexible manner and allows to
generate numerous distinct shapes of the predetermined
regions. Further, micro- or nano-scale regions in the
support substrate capable of forming reactive functional
groups or precursors thereof upon exposure to particle or
25 electromagnetic irradiation can be easily achieved.

Fig. 5